IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TELCORDIA TECHNOLOGIES, INC., Plaintiff, v. ALCATEL USA, INC., Defendants.	)	Civil Action No. 04-874 GMS
TELCORDIA TECHNOLOGIES, INC., Plaintiff, v. LUCENT TECHNOLOGIES, INC., Defendants.	)	Civil Action No. 04-875 GMS
TELCORDIA TECHNOLOGIES, INC., Plaintiff, v. CISCO SYSTEMS, INC., Defendants.	)	Civil Action No. 04-876 GMS

ORDER CONSTRUING THE TERMS OF U.S. Patent Nos. 4,835,763, Re. 36,633, and 4,893,306

After considering the submissions of the parties and hearing oral argument on the matter, IT IS HEREBY ORDERED, ADJUDGED, and DECREED that, as used in the asserted claims of U.S. Patent No. 4,835,763 (the "'763 patent"), U.S. Patent No. Re. 36,633 (the "'633 patent"), and U.S. Patent No. 4,893,306 (the "'306 patent"),

A. The '763 Patent

1. The term "a communications network having a plurality of nodes interconnected in ring configuration" is construed as "a communications network in which a plurality of nodes are connected to form a loop."

2. The term "multiplexed subrate communication[s]" is construed as "a high-level signal that can be separated into its constituent channels."

3. The term "evaluating the integrity of the multiplexed subrate communications" is construed as "determining whether each high-level signal is defective."

4. The terms "associated with the first ring and the second ring" and "associated with both the first ring and the second ring" are construed as "related to the first ring and the second ring."

5. The term "inserting an error signal on designated ones of said [the] subrate communications" is construed as "inserting an error signal on the channels following demultiplexing."

7. The terms "the detection of said error signal on said at least one of the subrate communications" and "the detection of said error signal on one of the subrate communications" are construed as "detecting an error signal on one or more of the channels following the demultiplexing."

8. The terms "monitoring means, associated with the first ring and the second ring, for evaluating the integrity of the multiplexed subrate communications on the first ring and second ring" and "monitoring means" are means plus function terms pursuant to 35 U.S.C. § 112(6). The function of the terms is "evaluating the integrity of the multiplexed subrate communications on the first ring and the second ring." The corresponding structure is "the circuitry at a controller that determines if a defect exists with the multiplexed subrate communications," and all equivalents thereof.

9. The term "insertion means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "inserting an error signal on designated ones of the subrate communications in response to said monitoring means detecting a lack of integrity on the multiplexed subrate communications on the first ring or the second ring, or both the first ring and the second ring." The corresponding structure is "the controller 118, 147, 148," and all equivalents thereof.

10. The term "selector means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "selecting, in response to the detection of said error signal on one of the subrate communications, another of the subrate communications that does not contain said error signal." The corresponding structure is "the selector 119, 149, 150, 151," and all equivalents thereof.

B. The '633 Patent

11. The term "residual time stamp (RTS)" is construed as "the value in a P-bit counter sampled at the end of each RTS period."

12. The terms "counting the network clock cycles" and "counting network clock cycles" are construed as "counting the number of cycles from the timing reference that synchronizes the source and destination nodes."

13. The term network clock is construed as "the timing reference that synchronizes the source and destination nodes."

14. The term "network clock cycles" is construed as "cycles of the network clock."

15. The term 2^P counts uniquely and unambiguously represent the range of possible network

clock cycles within an RTS period" is construed as "P is chosen so that 2^P defines a range of counts that represents each possible RTS period end-point with a different modulo 2^P count (bit pattern)."

16. The term "transmitting . . . an RTS" is construed as "the RTS is transmitted in a portion of the overhead other than the convergence sublayer overhead."

17. The term "at the end of each RTS period" is construed to have its plain and ordinary meaning.

22. The terms "the period between each pulse" and "the periods between pulses" are construed as "the time interval between two pulses."

19. The terms "derived network clock frequency f_{nx} and derived network clock" are construed as "a clock derived by dividing the network clock by a rational number."

20. The term "counting means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function is "counting network clock cycles modulo 2^P, where 2^P is less than the number of network clock cycles within an RTS period and P is chosen so that the 2^P counts uniquely and unambiguously represent the range of possible network clock cycles within an RTS period." The corresponding structure is "P-bit counter 12," and all equivalents thereof.

21. The terms "transmitting means" and "means for transmitting from the source node an RTS that is equal to the modulo 16 count of the derived network clock cycles in the RTS period" are means plus function terms pursuant to 35 U.S.C. § 112(6). The function of these terms is "transmitting over the telecommunications network an RTS at the end of each RTS period that is equal to the modulo 2^P count of network clock cycles at that time." The corresponding structure is "ATM Assembler 17," and all equivalents thereof.

22. The term "receiving means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "receiving the RTSs transmitted over the telecommunications network by said transmitting means." The corresponding structure is "ATM Disassembler 32 and AAL Overhead Processor 33 that extracts the RTS codes," and all equivalents thereof.

23. The term "converting means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "converting the received RTSs into a pulse signal in which the periods between pulses are determined from the numbers of network clock cycles associated with the counts of network clock cycles within said RTS periods." The corresponding structure is "FIFO 34, P-bit Comparator 35, P-bit Counter 36, gating circuitry 37,"and all equivalents thereof.

24. The term "means, at the source node, for defining a derived network clock frequency f_{nx} from a network frequency f_n where $f_{nx} = f_n/x$, x is a rational number, and f_{nx} is less than or equal to twice the service clock frequency" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "defining a derived network clock, frequency f_{nx}, from a network frequency f_n, where $f_{nx} = f_n/x$, x is a rational number, and f_{nx} is less than or equal to twice the service clock frequency." The corresponding structure is "divide by x circuit 11," and all equivalents thereof.

25. The term "means, at the source node, for counting the derived network clock cycles modulo 16 in an RTS period" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "counting the derived network clock cycles modulo 16 in an RTS period." The corresponding structure is "P-bit Counter 12 (where P=4)."

C. The '306 Patent

26. The terms "frame timing information" and "timing information" are construed as "frame alignment information."

27. The term "empty payload field" is construed as "a payload field that is empty of source data, but including bit signals of some kind, i.e. garbage bits."

28. The terms "filling the empty payload fields in said frame with data in packetized format from a plurality of sources which have access to the bit stream including circuit or packet sources," "inserting said packets from said sources into the empty payload fields of said frames," and "inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field" are construed as "replacing the empty payload field with data from a single source."

29. The term "data in packetized format" is construed as "a discrete block of data having an address header at the front thereof."

30. The term "data packet[s]" is construed as "a discrete block or discrete blocks of data, each having an address header at the front thereof."

31. The term "data . . . into packet format" is construed as "processing data from a plurality of sources into discrete blocks of data each having an address header at the front thereof."

32. The terms "plurality of sources which have access to the bit stream" and "plurality of sources having different bit rates and which have access to said bit stream" are construed as "two or more sources that each insert data into the generated bit stream via its own tributary."

33. The terms "such that data in packetized format from any of said sources is written into any

available empty payload field of any of said frames" and "such that a packet from any of said sources is inserted into any available empty payload field of any of said frames" are construed as "packets are only put into frames which are empty."

34. The term "inserting each of said packets comprised of data from one of said plurality of sources into an empty payload field of any of said frames available to said inserting means" is construed as "packets are only put into frames which are empty."

35. The terms "available empty payload field" and "empty payload field of any of said frames available to said inserting means" are construed as "an empty payload field that can be filled with a data packet from the source, among the plurality of sources, of the highest priority with a data packet ready to transmit."

36. The term "generating means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the "generating means" is "generating a train of frames wherein each frame includes a transmission overhead field containing timing information and an empty payload field." The corresponding structures are "control 210, tristate device 222, ROM 224, timing generator 209, bus 219, parallel to serial converter 216, signal output 206," and all equivalents thereof.

37. The term "processing means" is a means plus function term pursuant to 35 U.S.C. § 112(6). The function of the term is "processing data from a plurality of sources into packet format." The corresponding structure is "a plurality of packetizers 55," and all equivalents thereof.

38. The term "inserting means" is a means plus function term pursuant to 35 U.S.C. § 112(6).

The function of the "inserting means" is "receiving said train of frames and inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field of any of said frames available to said inserting means to form said bit stream so that data from each of said sources can be transmitted at its own desired bit rate via said bit stream and so that data from said plurality of sources can be transmitted simultaneously via said bit stream." The corresponding structures are "control 210, tristate device 218, tristate device 220, frame detect 214, timing generator 209," and all equivalents thereof.

39. The term generating a bit stream is construed as "creating either serial or parallel bit streams."

Dated: June 22, 2006

/s/ Gregory M. Sleet
UNITED STATES DISTRICT JUDGE